

# Keys Wastewater Plan

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Prepared By:

## Monroe County Engineering Division

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At the Request of:

**Florida House of Representatives**  
**Environment and Natural Resources Council**  
2007-2008 Interim Project

November 2007

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## **EXECUTIVE SUMMARY**

This Keys Wastewater Plan, prepared at the request of the Florida House of Representatives Environment and Natural Resources Council, provides a comprehensive summary of county-wide progress toward achieving compliance with 2010 wastewater effluent standards. Background information for each local government and utility responsible for installation of wastewater treatment facilities is provided. The costs associated with completed and remaining projects is provided on a county-wide basis, as well as for each wastewater project. A summary of unfunded costs per year has been compiled based on information submitted by each wastewater entity.

Implementation of this Keys Wastewater Plan is estimated to cost \$939M to implement through completion. Approximately \$264M will have been spent through the end of September 2008 to retrofit Monroe County with 2010 compliant wastewater treatment. Approximately \$50M of this cost has been funded through grants from the State of Florida. The remaining cost to implement the Keys Wastewater Plan is estimated at \$675M. The funding gap between project costs and available funding is \$336M.

Monroe County and municipal governments are committed to completing implementation of the Keys Wastewater Plan. The Keys Wastewater Plan has essentially adopted the Master Plan recommendation to install regional wastewater treatment systems and to minimize the on-site wastewater nutrient reducing systems (OWNRS). With July 2010 just two and a half years away, it is imperative that funding plans for these projects be completed prior to the deadline to minimize the use of OWNRS which have not been documented to meet Best Available Technology standards.

## **INTRODUCTION**

In 1999, the Florida Legislature set Advanced Wastewater Treatment (AWT) effluent standards of 5 milligrams/liter (mg/L) for biological oxygen demand (BOD), 5 mg/L for total suspended solids (TSS), 3 mg/L for total nitrogen (TN) and 1 mg/L for total phosphorus (TP) and Best Available Technology (BAT) standards of 10 mg/L BOD, 10 mg/L TSS, 10 mg/L TN and 1 mg/L TP. The incremental cost beyond secondary treatment to achieve nutrient reduction compliant with the BAT/AWT effluent standards is directly related to water quality improvement for preservation of natural resources.

The Monroe County Master Plan (2000) evaluated alternatives ranging from regional centralization to simply replacing existing onsite systems with BAT treatment. Monroe County was divided into 27 study areas for the analysis and assessed to identify the costs and nutrient load reduction associated with each alternative. Regional collection and treatment at AWT/BAT standards scored highest in all but 3 areas.

Wastewater treatment projects within the boundaries of Monroe County are being implemented by 9 separate entities (utilities and local governments) who are all part of a comprehensive effort to meet the State's 2010 requirements for wastewater effluent. The municipalities of Islamorada, Key Colony Beach, Marathon, and Key West have established utilities. The City of Layton partnered with the Florida Keys Aqueduct Authority (FKAA) for wastewater treatment. Within unincorporated Monroe County, implementation of the Master Plan is being handled by the North Key Largo Utility Corp. at Ocean Reef, the Key Largo Wastewater Treatment District in Key Largo and Key West Resort Utility Corp. at Stock Island. The Florida Keys Aqueduct Authority and Monroe County have partnered to complete remaining projects in the unincorporated areas. Refer to Appendix A for a description of the wastewater utilities and governmental entities, as well as Figures 1-3 that depict their geographic location within Monroe County.

## SECTION 1

### PROJECT STATUS

This section provides a status summary for the completed and proposed wastewater projects within Monroe County. Each wastewater entity has made progress toward achieving 2010 compliance consistent with the hot spot priorities reported in the Master Plan. Table 1.0 provides a summary of Equivalent Dwelling Units (EDUs) served by each wastewater project. Approximately 38% of the 75,000 county-wide EDUs are compliant with 2010 effluent requirements. Another 11% are under construction and 22% are in the engineering design phase. Additional detail on the technical approach for each wastewater project is further described in Appendix B.

**Table 1.0 Monroe County Wastewater Project Implementation Summary**

Wastewater Project	Total EDUs	Planning	Design	Construction	Connection <sup>1</sup>	
		EDUs	EDUs	EDUs	Completed EDUs	Remaining EDUs
Village of Islamorada	10,690	9,690	0	0	500	500
Key Colony Beach	1,502				1,502	
City of Marathon	7,818		5,429	2,389		
City of Key West	24,075				24,075	
City of Layton	350				317	33
Ocean Reef <sup>2</sup>	1,800		1,800			
Key Largo	13,707	5,483	5,442	1,752	789	241
Stock Island <sup>2</sup>	2,672			2,672		
Unincorporated Monroe County	12,381	6,781	3,552	1,469	359	70
Total	74,995	21,954	16,223	8,282	27,542	844
Percentage	100%	29%	22%	11%	37%	1%

<sup>1</sup> Connection refers to areas in compliance with 2010 effluent requirements.

<sup>2</sup> Central collection systems are installed in these areas; upgrade of secondary WWTPs to AWT required.

## **SECTION 2**

### **IMPLEMENTATION SCHEDULE**

This section provides an overview of the Keys Wastewater Plan Implementation Schedule. Each wastewater developed and submitted its own priority schedule based on project scope, funding availability and 2010 compliance. There is currently no comprehensive plan that prioritizes the projects on a county-wide basis.

#### **Village of Islamorada**

The Village of Islamorada has completed construction of the AWT plant to serve 1,400 EDUs and the collection system to serve 1,000 EDUs in North Plantation Key. A decentralized system for approximately 150 EDUs in the low population density area of Lower Matecumbe is in the engineering design phase. Construction of a central collection system and AWT plant to serve the remaining 1596 EDUs in Lower Matecumbe is planned to begin August 2009.

Two projects with collection systems and WWTPs to serve the remaining 6,741 EDUs on Plantation Key and Upper Matecumbe Key are planned to begin by February 2008 and February 2010, respectively. The Windley Key collection system and WWTP to serve 804 EDUs are planned for construction in October 2010.

#### **Key Colony Beach**

Key Colony Beach operates a central collection system and AWT plant serving 1,500 EDUs. The collection system, which was constructed in 1960, requires repair to minimize infiltration and inflow, as well as to maximize treatment efficiency. This project is compliant with 2010 wastewater effluent standards.

#### **Marathon**

Construction of the Little Venice central collection system and AWT plant serving 945 EDUs is complete. Construction of the collection system to serve another 2,389 EDUs is complete and design of the central collection system and WWTPs for the remaining six service areas to serve 5,429 EDUs is complete. Compliance with the 2010 effluent requirements will be achieved, provided that construction of the remaining Marathon projects begins by January 2009.

#### **City of Key West**

The City of Key West operates an AWT plant serving 24,075 EDUs. This project is compliant with 2010 wastewater effluent standards.

#### **City of Layton**

FCAA operates a BAT plant serving 350 EDUs in the City of Layton. This project is compliant with 2010 wastewater effluent standards.

## **Ocean Reef**

The North Key Largo Utility Corporation operates a secondary treatment facility serving 1800 EDUs at Ocean Reef. Construction is anticipated to be complete by July 2010.

## **Key Largo**

KLWTD, which is divided into 14 sub-service area basins, currently operates an AWT plant serving approximately 1,000 EDUs within the Basin E sub-service area. Construction of the collection system to serve an additional 1750 EDUs in Basins A and D is underway. Engineering is underway for the collection systems to serve approximately 5,442 EDUs in Basins B, C, the remaining portion of Basin E, and Basin F. Construction of the AWT plant to serve Basins A-K is scheduled to begin in March 2008. Construction of the remaining collection systems for Basins G-K, as well as the southern force main are scheduled to begin between October 2009 and July 2010.

## **Stock Island**

Key West Resort Utility Corporation serves 1672 EDUs on Stock Island and is completing the upgrade of the existing secondary plant to AWT.

## **Unincorporated Monroe County**

FKAA currently operates a BAT plant serving 429 EDUs in Baypoint. Seven projects are planned to provide 2010 compliant wastewater service to the remaining areas. Construction of the central collection system and AWT plant to serve 2200 EDUs in the South Lower Keys is underway and scheduled for connection in March 2009. Design of the central collection system and AWT Plant to serve 2200 EDUs in the Middle Lower Keys is underway. Connections to the system could commence as early as March 2010 provided that construction commences in October 2008. A combination of central and decentralized wastewater service to serve 4450 EDUs is planned for the Middle Lower Keys. Design of the system is scheduled to begin in October 2008 with construction beginning in October 2009. It is anticipated that connections to the central system will begin in March 2011.

## SECTION 3

### PROJECT COSTS AND FUNDING SOURCES

The project completion dates discussed above, and outlined in detail in Appendix C are contingent upon the wastewater entities securing adequate funding for all phases of the projects. The current estimate to complete all of the projects is \$937M; currently, 64%, or \$601M is funded and 36%, or \$336M is unfunded.

The total project cost is comprised of the following elements that cover the project from conception to connection to the completed system:

- **Planning and Administration** – including such activities as the preparation of master plans, facilities plans and capital financing plans.
- **Engineering and Design** - including engineering and design costs for preliminary engineering, detailed design and preparation of project specifications for bid documents.
- **Land Costs** – includes the acquisition of land and sites for treatment plants, remote pump stations and other necessary hardware.
- **Construction Costs** – including the construction of plants, collection systems, and roadway/paving restoration. The construction cost estimates provided also incorporate appropriate planning and cost escalation contingencies.

Wastewater projects are currently funded from several sources. These sources are:

- **Local Planning and Engineering Revenue** – several Keys entities have secured funding for planning and engineering by implementing Municipal Service Taxing Units or levying non-ad valorem assessments.
- **System Development Fee Revenue** – another primary source of funding for many Keys wastewater entities is system development charges/fees to its residential and commercial customers. In many cases, this revenue stream has been pledged for repayment of construction bonds and/or FDEP State Revolving Fund loans.
- **Additional Local Revenue** – includes the contribution of Local Discretionary Sales Surtax (1 cent) received by local government entities for capital projects
- **State Grants** – including grants from sources such as FDEP, South Florida Water Management District
- **Federal Grants** – including federal funding provided by the Army Corp of Engineers and FEMA

Table 3.0 Keys Wastewater Plan – Project Costs and Funding Sources summarizes the project cost breakdown for each wastewater entity, the funding sources and amounts that have been secured to date, and the amount that remains unfunded. Additional detail on project costs and funding sources for each wastewater entity is in Appendix C.

Table 3.0 Monroe County Wastewater Project Costs (\$M) and Funding Sources (\$M) Summary

Project Cost Breakdown								
Wastewater Entity	Planning and Admin	Engineering and Design	Land Acquisition	Construction	Private Property Construction Costs	Total Construction Costs	Total Project Costs	Total Funding Sources
North Key Largo Utility Corp	\$ 0.10	\$ 0.75	\$ -	\$ 9.50	\$ -	\$ 9.50	\$ 10.35	\$ 5.33
Key Largo WTD	7.86	6.72	3.65	179.28	50.77	\$ 220.55	\$ 248.29	167.58
Islamorada	5.10	12.20	7.21	113.19	37.33	\$ 145.19	\$ 169.70	115.89
City of Layton	0.95	-	-	5.20	1.28	\$ 6.48	\$ 6.48	6.48
Key Colony Beach	-	-	-	-	-	0.50	0.50	-
Marathon	1.12	3.72	3.67	76.53	25.62	102.14	110.65	84.74
Monroe County and FCAA	11.38	10.80	2.30	235.97	42.15	\$ 278.12	\$ 302.60	154.93
Key West	-	2.00	-	23.03	-	\$ 23.03	\$ 89.03	66.42
<b>Total Florida Keys</b>	<b>\$ 26.51</b>	<b>\$ 36.19</b>	<b>\$ 16.83</b>	<b>\$ 642.70</b>	<b>\$ 157.15</b>	<b>\$ 785.52</b>	<b>\$ 937.60</b>	<b>\$ 601.38</b>

Funding Sources								
Wastewater Entity	System Development Fees	Private Construction Revenue	Local Planning Revenue (MSTUs)	Infrastructure Tax and Other Local Sources	State Grants	Federal Grants	Total Funding Sources	Unfunded Costs
North Key Largo Utility Corp	\$ -	\$ -	\$ 5.18	\$ -	\$ 0.16	\$ -	\$ 5.33	\$ 5.02
Key Largo WTD	75.01	50.77	4.01	22.50	10.08	5.21	167.58	80.70
Islamorada	66.22	32.00	-	0.85	10.30	6.51	115.89	53.81
City of Layton	0.95	1.28	0.10	1.28	3.35	0.80	6.48	-
Key Colony Beach	-	-	-	-	-	-	-	0.50
Marathon	34.98	25.62	2.79	12.76	8.10	0.50	84.74	25.91
Monroe County and FCAA	44.86	42.15	0.93	43.52	14.73	8.74	154.93	147.68
Key West	-	-	-	-	2.00	0.42	66.42	22.61
<b>Total Florida Keys</b>	<b>\$ 222.02</b>	<b>\$ 151.82</b>	<b>\$ 13.01</b>	<b>\$ 80.91</b>	<b>\$ 48.72</b>	<b>\$ 22.18</b>	<b>\$ 601.38</b>	<b>\$ 336.22</b>



As Table 3.0 indicates, \$336M of the remaining wastewater work County-wide is not funded. Table 3.1 breaks this amount out by year based on current project timelines, so that the timeframe for expending funds can be seen.

**Table 3.1 Funding Gap by Fiscal Year for Monroe County-Wide Wastewater Projects**

<b>Wastewater Entity</b>	<b>FY07 Unfunded</b>	<b>FY08</b>	<b>FY09</b>	<b>FY10</b>	<b>FY11</b>	<b>Total Unfunded</b>
North Key Largo Utility Corp	\$ -	\$ 5,015,150	\$ -	\$ -	\$ -	\$ 5,015,150
Key Largo WTD	\$ 13,212,068	\$ 9,774,000	\$ 19,595,000	\$ 27,107,000	\$ 11,015,000	\$ 80,703,068
Islamorada	\$ 23,162,000	\$ 9,150,983	\$ 16,435,500	\$ 5,063,000	\$ -	\$ 53,811,483
City of Layton	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
Key Colony Beach	\$ -	\$ 500,000	\$ -	\$ -	\$ -	\$ 500,000
Marathon	\$ 1,752,671	\$ 21,471,600	\$ 2,689,363	\$ -	\$ -	\$ 25,913,634
Monroe County and FKAA	\$ 49,170,000	\$ 98,505,000	\$ -	\$ -	\$ -	\$ 147,675,000
Key West	\$ 6,110,513	\$ 5,745,540	\$ 2,257,500	\$ 2,664,750	\$ 5,827,350	\$ 22,605,653
<b>Total Florida Keys</b>	<b>\$ 93,407,252</b>	<b>\$ 150,162,273</b>	<b>\$ 40,977,363</b>	<b>\$ 34,834,750</b>	<b>\$ 16,842,350</b>	<b>\$ 336,223,988</b>

Monroe County Wastewater Projects require \$150M between October 2008 and September 2009 to keep pace with wastewater compliance in July 2010. Representative Ros-Lehtinen has requested that the U.S. Army Corp of Engineers put \$29M in its budget for the Water Quality Improvements program. The U.S. Army Corp of Engineers 2006 Environmental Assessment reported that, "The use of federal funds to assist in the construction of the wastewater treatment facility is the best means to reduce this nutrient source and protect the Sanctuary." If this request is awarded, the September 2008-October 2009 funding gap is reduced to \$121M.

At least \$60M of the \$937M total project costs is directly attributable to upgrading facilities from secondary treatment to 2010 compliant standards. This figure includes the incremental cost to increase plant capacity to meet more stringent standards, (based on an assumption that the plant would require from 25% - 40% additional capacity) and deep-well injection, where required, to meet 2010 standards.

## **Appendix A – Wastewater Entities and Maps**

## **Wastewater Utilities/Entities in the Florida Keys**

### ***Upper Keys:***

- **North Key Largo Utility Corporation (NKLUC):** The North Key Largo Utility Corporation (NKLUC) is responsible for providing water and wastewater services to the Ocean Reef Community located on the northernmost tip of Key Largo. The Ocean Reef community is a gated membership-owned residential development with about 1,800 residential units and two golf courses.
- **Key Largo Wastewater Treatment District (KLWTD):** The Key Largo Wastewater Treatment District (KLWTD) is an independent utility created by the State of Florida in June 2002. The KLWTD service area extends from the north end of the Florida Keys at the Dade County line (approximately US 1 Mile Marker (abbreviated as MM) 124) south and westward to Tavernier Creek (approximately MM 91) and includes the properties along County Road 905 up to but not including the Ocean Reef District.
- **Islamorada, Village of Islands:** Islamorada, Village of Islands, is a municipality which was incorporated in December 1997. Islamorada is comprised of four islands within the Florida Keys, beginning just south of MM 91 and extending to MM 73.

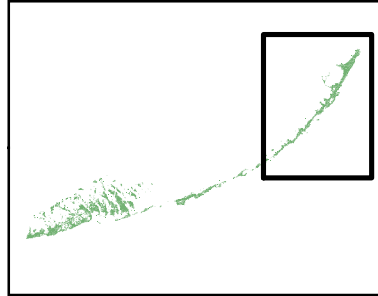
### ***Middle Keys:***




- **City of Layton:** The City of Layton, a municipality which incorporated in 1963, is located at MM 68.5 along the Overseas Highway on Long Key. The City of Layton's wastewater treatment project was implemented in partnership with the Florida Keys Aqueduct Authority (FKAA).
- **City of Key Colony Beach (KCB):** The incorporated municipality of City of Key Colony Beach is located at MM 53.5 on an island just south of the Overseas Highway connected via a causeway with a small bridge.
- **City of Marathon:** The City of Marathon is a municipality which was incorporated in 1999. The City of Marathon's boundaries are from the east end of the Seven Mile Bridge (approximately MM 47) to the west end of Tom's Harbor Bridge (approximately MM 60).
- **Unincorporated Middle Keys:** The unincorporated areas of Monroe County in the Middle Keys (Conch Key and Duck Key) are implementing wastewater treatment projects in partnership with the Florida Keys Aqueduct Authority (FKAA). Monroe County is represented by the County's Board of Commissioners. The FKAA was created in 1937 by special legislation of the State. The FKAA is the sole provider of potable water for all the residents of the Florida Keys, and in 1998 and 2002 the FKAA's enabling legislation was amended to include collection, treatment and disposal of wastewater in certain areas of the Keys.

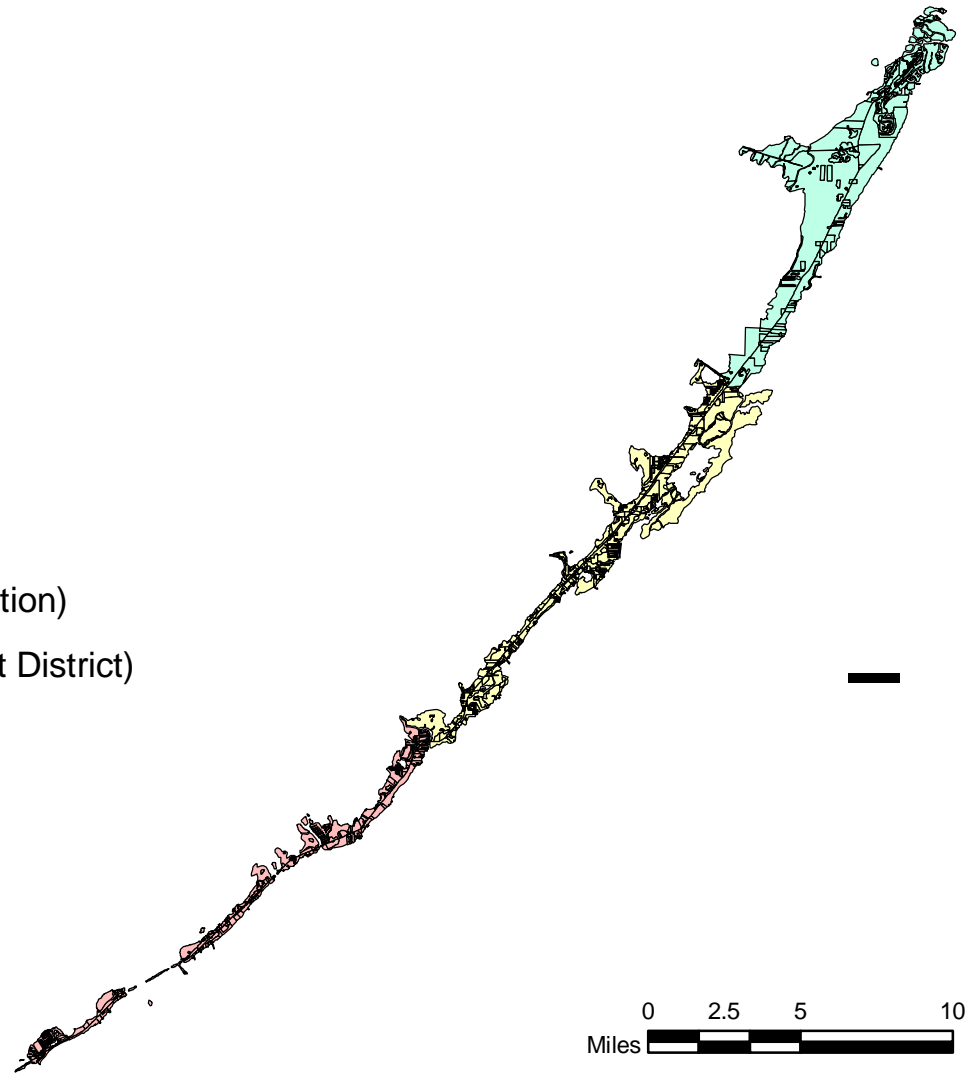
### ***Lower Keys:***

- **The City of Key West:** The City of Key West, an incorporated municipal government is near the end of the chain of islands known as the Florida Keys, and is the southern-most city in the continental United States.

- **Unincorporated Stock Island:** Key West Resort Utilities Corp. is a private utility that provides AWT service to approximately 2,672 EDUs on Stock Island.
- **Unincorporated Lower Keys:** Wastewater projects in the unincorporated area of Monroe County in the Lower Keys from the west end of the Seven Mile Bridge to Key Haven at approximately MM 6.5 are being implemented in partnership with the Florida Keys Aqueduct Authority (FKAA).



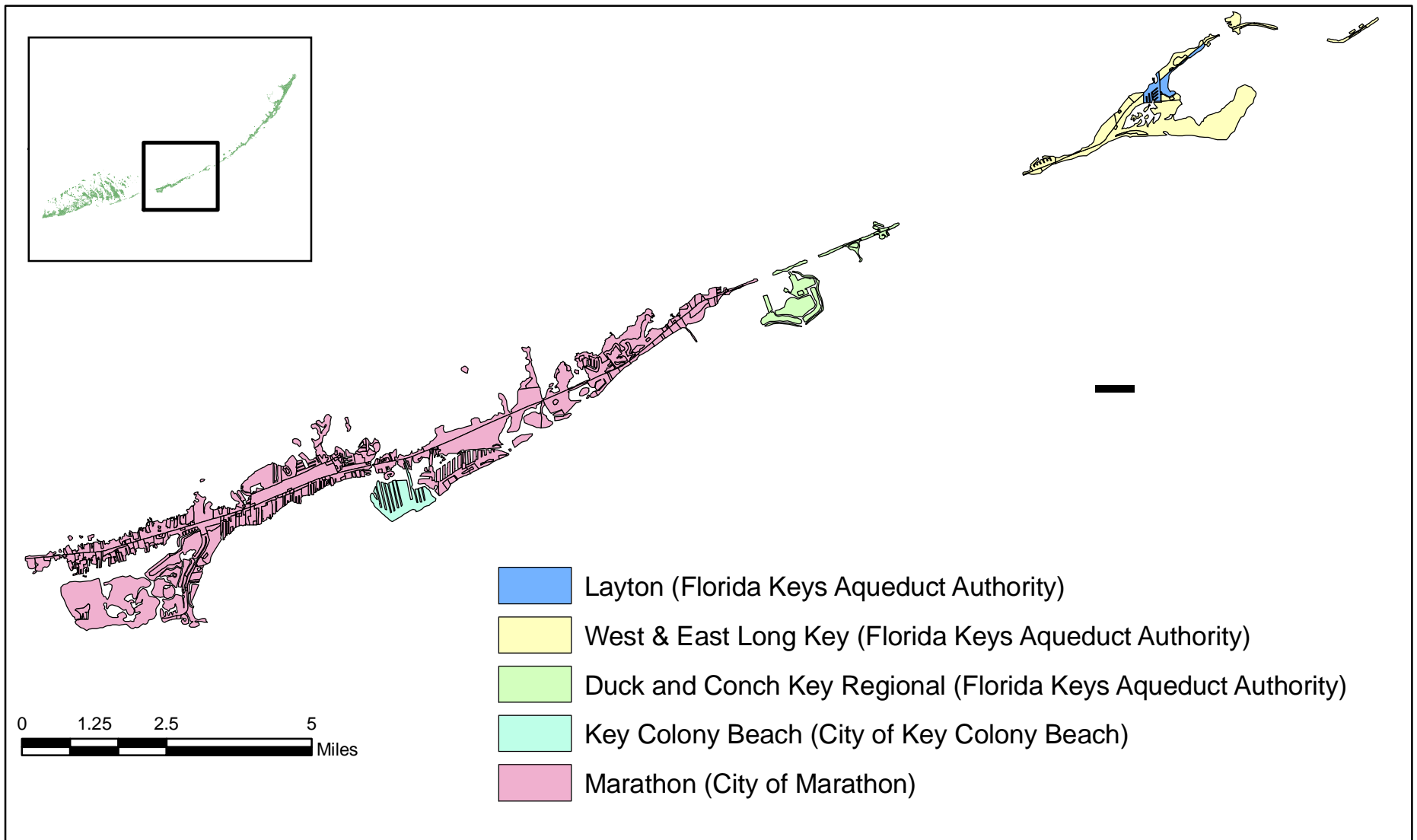
-  Ocean Reef (North Key Largo Utility Corporation)
-  Key Largo (Key Largo Wastewater Treatment District)
-  Islamorada (Islamorada, Village of Islands)



**Monroe County Wastewater Department**  
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## Upper Keys Wastewater Project Areas

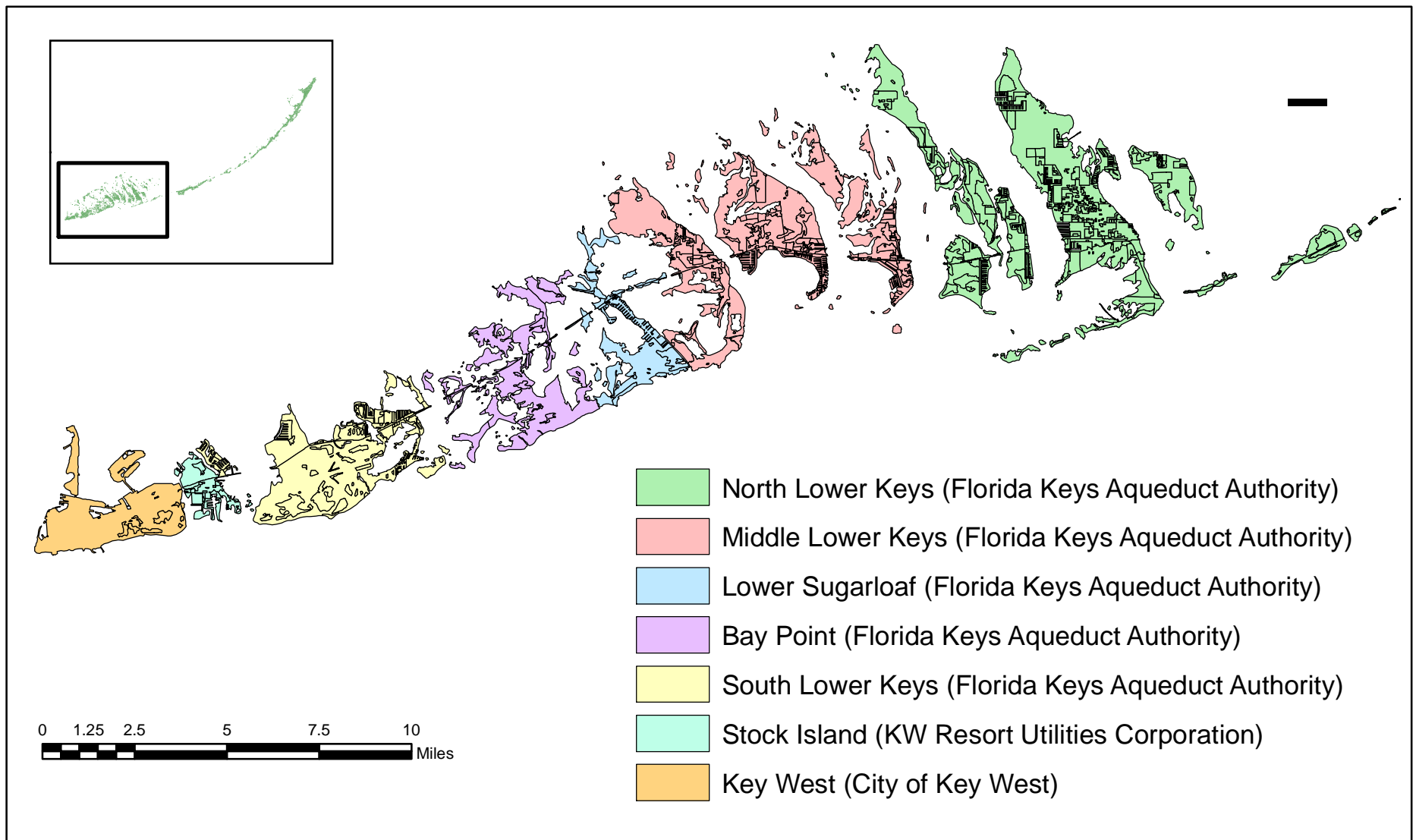
**Figure 1**



Monroe County Wastewater Department  
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## Middle Keys Wastewater Project Areas

Figure 2



**Monroe County Wastewater Department**  
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 Key West, Florida 33040

## Lower Keys Wastewater Project Areas

**Figure 3**

## **Appendix B – Technical Approach**



## **Technical Approach by Wastewater Project**

There are several different entities in Monroe County which are concurrently responsible for achieving the county-wide goal of compliance with advanced wastewater treatment standards by 2010. The majority of these entities have adopted planning documents, such as master plans or facilities plans, which outline their technical and scheduling approach to implementation of their individual projects. The following information is a synopsis of the project implementation plan for each of these entities.

### **Islamorada**

Islamorada's current wastewater management plan calls for replacement of existing wastewater infrastructure with municipally-managed wastewater collection and treatment systems. In all but one community, these systems will consist of centralized wastewater collection systems and wastewater treatment plants. The exception is the northeastern portion of Lower Matecumbe Key, where decentralized, clustered wastewater treatment systems are being evaluated for implementation.

The type of wastewater collection systems recommended by the Master Plan are vacuum systems, in which one or two large vacuum stations provide the mechanical force to draw wastewater from the source to the treatment plant. Immersed Membrane Bioreactor (IMB) plants are recommended for wastewater processing at Islamorada's centralized wastewater treatment facilities. The IMB process is an extended aeration activated sludge process in which a continuous flow of wastewater is treated at a predetermined flow rate. The advantages of this type of plant include its compact footprint, its ability to treat a range of flow rates, and the fact that the sludge it generates is more concentrated than in most other activated sludge processes, reducing disposal costs.

### ***Project Description by Project Segment/ Service Area***

Five centralized wastewater treatment plant sites are envisioned for Islamorada's four islands. North Plantation Key, which produces 45% of Islamorada's wastewater, will support two plants, one in the northern area of the key, and one in the south. Current plans for Windley, Upper Matecumbe and Lower Matecumbe Keys entail one centralized wastewater treatment plant site per island.

The decentralized wastewater treatment system under consideration for the northeastern portion of Lower Matecumbe Key includes both onsite and offsite components. The offsite components will be clustered on a dedicated piece of property or properties separate from those being serviced.

Islamorada's implementation approach is divided into the following project segments/service areas:

- **North Plantation Key (NPK):** Construction of a 302,500 mgd-ADF wastewater treatment facility and a vacuum collection system which serves the area from approximately MM 90 north to Tavernier Creek Bridge.
- **South Plantation Key (SPK):** includes construction of a 303,000 mgd-ADF wastewater treatment facility at MM 86.7 and a vacuum collection system to serve the area from approximately MM 85.5 to MM 88

- **Mid-Plantation Key (MPK):** includes expansion of the existing plant at MM 90 on North Plantation Key to a total of 510,500 mgd-ADF and a vacuum collection system to serve the area from approximately MM 88 to MM 89.7
- **Lower Matecumbe Key (LMK):** includes construction of a 290,500 mgd-ADF wastewater treatment facility at MM 74.5 and a vacuum collection system to serve the area from approximately MM 73.6 to MM 77.6
- **Upper Matecumbe Key (UMK)** includes construction of a 585,000 mgd-ADF wastewater treatment facility at MM 80.9 and a vacuum collection system to serve the area from approximately MM 79 to MM 83.4
- **Windley Key (WK)** includes construction of a 128,700 mgd-ADF wastewater treatment facility at MM 84.6 and a vacuum collection system to serve the area from approximately MM 83.4 to MM 85.5

### **City of Key Colony Beach**

Key Colony Beach first constructed a central municipal wastewater treatment plant and collection system in the late 1960's. Key Colony Beach subsequently completed a wastewater treatment plant renovation in order to make its existing plant AWT compliant shortly after the State legislative mandate in 1999 by borrowing funds from the State. However, because of the age of the collection system there are areas that need repair and replacement to prevent inflow and infiltration. KCB continues to replace faulty laterals, slip-line other areas, and replace and renovate manholes and plans to continue this process over the next 3 or 4 years until renovations are complete.

### **City of Marathon**

The City's engineers have determined that vacuum systems are the most cost-effective method of wastewater collection for larger service areas, but that a combination of conventional gravity systems and macerator or STEP systems are more appropriate for smaller service areas. It was also determined that in areas of low density or remote location, on-site and cluster systems are the appropriate correct choice. The construction and O&M costs for various combinations of wastewater treatment plants were examined. It was found that the capital costs for construction of wastewater treatment plants (WWTPs) to serve the City of Marathon could be reduced by using a combination of: 1) pre-engineered systems; 2) upgraded existing WWTPs; 3) relocated BAT WWTPs; and 4) on-site and cluster type treatment systems. This also allowed the elimination of deep injection wells and long runs of force mains.

### ***Project Description by Project Segments/Service Areas***

Based on the technical approach outlined above, the Marathon project has been divided into seven service areas, briefly described as follows:

- **Service Area 1, Knight's Key,** is currently in process of re-development by a private developer. The year 2015 estimated wastewater flows are .023 MGD. The City of Marathon intends to partner with the developer to provide a new best achievable treatment (BAT) plant to handle the flows from the entire island. The City will design and construct a collection system to convey the existing properties' sewage to the new BAT wastewater treatment plant.

- **Service Area 2, Boot Key**, currently has one small facility surrounding the radio tower complex. The year 2015 estimated wastewater flows are .0006 MGD. The City will provide service on Boot Key with a small BAT on-site unit located such that gravity flow will provide the only needed conveyance.
- **Service Area 3, Vaca Key (west)**, includes both ocean side and bayside from 11<sup>th</sup> Street up to 33<sup>rd</sup> Street. The year 2015 estimated wastewater flows are .247 MGD. This area will be served primarily by a vacuum collection system and a new .250 MGD nutrient removal wastewater treatment plant. Pine Island will be served with an on-site system
- **Service Area 4, Vaca Key (central)**, includes both ocean side and bayside from 33<sup>rd</sup> Street through 60<sup>th</sup> Street as well as all of the Sombrero area. The year 2015 estimated wastewater flows are .399 MGD. This area will be served by a vacuum collection system and a new .400 MGD nutrient removal wastewater treatment plant. Effluent disposal will include re-use at the Sombrero Country Club.
- **Service Area 5, Vaca Key (east)**, includes both ocean side and bayside from 60<sup>th</sup> Street through Vaca Cut and includes the Little Venice Area. The year 2015 estimated wastewater flows are .490 MGD. This area will be served by and expansion of the existing vacuum collection system and expansion of the existing Little Venice advanced wastewater treatment plant to .499 MGD. Effluent disposal will include re-use on the City of Marathon parks and events fields.
- **Service Area 6, Fat Deer Key (west)**, includes both ocean side and bayside from Vaca Cut to Coco Plum and down Coco Plum Drive to it's end. The year 2015 estimated wastewater flows are .155 MGD. This area will be served by constructing vacuum collection system and upgrading an existing package plant in capacity and in treatment to meet advanced wastewater treatment standards.
- **Service Area 7, Grassy Key**, includes both ocean side and bayside from the east end of Fat Deer Key through to the east end of Grassy Key. The year 2015 estimated wastewater flows for this area are .063 MGD. The large geographic size and distance between properties in this area requires that a combination of systems be used in this area to be economically feasible. As a result, this area will be served by: re-location of at least two (2) BAT WWTPs from existing facilities, existing gravity systems, liftstations to redirect the flow to the new plants and on-site and cluster systems.

## City of Key West

The City of Key West opened its wastewater treatment facility in 1989, but has experienced an economic and environmental crisis due to nearshore water pollution which closed all or most Key West beaches from May 1999 through May 2000. Extensive fecal coliform, enterococcus testing, and sewer system leak testing demonstrated that the raw sewage problem was primarily the result of leaky public (City and Navy) and private sewer lines. The City treated 40% seawater each day the pipes remained in disrepair. Sanitary sewer pipes that leak saltwater in (Inflow & Infiltration - I&I) from public and private property also leak raw sewage into groundwater and nearshore waters and exfiltration from the pipes endangers public health and the environment. The City has taken the following steps to address the problem:

- The City of Key West established a block-by-block dye/hydraulic testing of the watertight integrity of all public and private sewer systems. The City requires the immediate replacement of all leaky private property sewer laterals.
- In September 1999, the City accelerated the remaining 7-year sewer reconstruction capital plan into 24 months. All sewer collection system projects were to be completed within 3 years from March 1998.
- In July 2000 the City completed construction on a 3,300 feet Class I Deep Injection Well to eliminate the City's wastewater ocean outfall. A second back-up Deep Injection Well was completed in 2006.
- Key West accelerated the design and construction retrofit of the wastewater treatment plant (WWTP) to meet advanced wastewater treatment (AWT) standards in May 1999.
- The City eliminated 99.9% of all Key West septic tanks and cesspits.
- Key West requested the State and EPA to approve the Zero Discharge (ZD) Designation.
- The City completed an installation of an ultraviolet disinfection system at the wastewater treatment plant in 2007, removing a potentially dangerous chlorine system.
- The City has begun installing generators at its sewer lift stations so that the system remains operational during an extended loss of power as might be seen in situations such as hurricanes. Completion is expected in 2008.

### ***Project Description by Project Segments/Service Areas***

Water quality issues related to the sanitary sewer have shown improvements. Almost all beaches remained opened throughout the summer of 2000. Percent of saltwater at the Wastewater Treatment Plant (WWTP) has been reduced from 40% to 9 %. Total Average Daily Flow has been reduced from 8 Million Gallons per Day (MGD) to 4 MGD. Future planned improvements to the City's wastewater system include:

- Completion of the sewer lift station generators project
- Installation of a sewer system for the Truman Waterfront property
- Diffused Aeration retrofit system for the wastewater treatment plant
- Extension of Pump Station DA force main to Pump Station D
- 30" Forcemain Extension/Headworks capacity expansion
- Bio-solids dryer system for treatment plant.

### **City of Layton**

In 2006, the City of Layton, in partnership with the FCAA, completed construction of a central wastewater system to serve the entire city. The collection system and transmission system consists of approximately 8,400 linear feet of conventional gravity sewers, sewage pumping stations, force main and lift stations. The wastewater treatment plant is a 0.049 mgd facility which meets BAT standards, with effluent disposal via shallow injection wells. There are no future projects currently planned for the City of Layton.

## **North Key Largo Utility Corporation**

The current wastewater treatment facility operated by the North Key Largo Utility Corporation (NKLUC) is a 550,000 gallon per day (gpd) extended aeration secondary treatment plant discharging to four Class V injection wells meeting typical secondary treatment effluent standards.

The treatment plant will be upgraded to AWT standards by retrofitting the existing treatment system into biological nutrient removal system (four stage Bardenpho) using microfiltration membranes. A portion of the existing aeration basins will be reconfigured while a portion of the existing aeration basins are being reconstructed to optimize the configuration of the flat plate membrane system. An ultraviolet disinfection is being provided to reduce the need for useage of chlorine for disinfection. The entire treatment system will be covered and an odor control system provided to collect and treat the offgases from the treatment process. The facility will be designed to meet USEPA Class I reliability standards necessary to meet Florida Department of Environmental Protection standards for reuse facilities.

As part of the plant upgrades to meet AWT standards, NKLUC is interested in implementing beneficial reuse of the treated wastewater effluent. The utility desires to use reclaimed water as a substitute water source supplying a portion of the irrigation needs of the development. To implement reuse, a portion of the treated effluent will be further treated using a reverse osmosis (RO) treatment process reducing the chloride concentration so that the effluent can be used as a source for a portion of the irrigation water needed within the development.

## **Key Largo Wastewater Treatment District (KLWTD)**

Initially, the Monroe County Sanitary Wastewater Master Plan collection system alternatives were re-evaluated by KLWTD using updated materials quantities and current unit prices. KLWTD determined that in most areas vacuum collection systems are the most cost effective method for wastewater collection. In three remote areas, however, a gravity collection system that pumps directly into the US 1 force main is the most economical alternative. The large number of service basins which would each require a separate wastewater treatment facility, disposal wells, land acquisition, and licensed operator makes a centralized wastewater treatment and disposal facility the most practical and affordable alternative.

### ***Project Description by Project Segment/ Service Area***

The Monroe County Comprehensive Sanitary Wastewater Master Plan divided the County into Planning Area Analysis Enumeration Districts (PAED's). The KLWTD area includes PAED 15 through PAED 20. KLWTD has further subdivided these PAEDs into lettered service basins A through K. These sub basins are the basis of cost estimating and planning for KLWTD. These project sub basins are briefly described as follows:

- **Service Basin A** includes the Sexton Cove, Lake Surprise, Largo Highlands, Ocean Isle Estates subdivisions and the commercial properties adjacent to US 1. The year 2015 estimated wastewater flows are .131 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.

- **Service Basin B** extends from approximately US 1 MM 105 to Adams Waterway, including the commercial properties along US 1. The year 2015 estimated wastewater flows are .248 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin C** extends from Adams Waterway to approximately MM 102.5., including commercial properties. The year 2015 estimated wastewater flows are .144 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin D** is approximately MM 102.5 to MM 101). The year 2015 estimated wastewater flows are .123 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin E** includes the area from MM 101 to MM 100. The bay (north) side of US 1 has an existing vacuum collection system with estimated wastewater flows of .177 MGD. The remainder of the service area on the ocean (south) side of US 1 has a year 2015 estimated wastewater flows are .055 MGD. The ocean side of this service basin will be served by a gravity collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin F** extends from approximately MM 100 to MM 99.5. The year 2015 estimated wastewater flows are .344 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin G** extends from MM 99.5 to MM 98.5. The year 2015 estimated wastewater flows are .285 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin H** includes subdivisions and commercial properties from MM 98.5 to MM 97. The year 2015 estimated wastewater flows are .107 MGD. This basin will be served by a gravity collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin I** includes subdivisions and commercial properties from approximately MM 97 to MM 94. The year 2015 estimated wastewater flows are .174 MGD. This basin will be served by a gravity collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin J** includes subdivisions and commercial properties from approximately MM 94 to MM 93. The year 2015 estimated wastewater flows are .080 MGD.. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.
- **Service Basin K** includes the area from approximately MM 93 to Tavernier Creek. The year 2015 estimated wastewater flows are .149 MGD. This area will be served by a vacuum collection system with treatment and disposal handled at the central wastewater treatment facility.

## **Monroe County / FKAA**

FKAA also evaluated the use of vacuum collection systems as recommended by the Monroe County Sanitary Wastewater Master Plan. The characteristic cost benefit of vacuum systems is shallow pipe installation and reduced excavation/restoration. FKAA elected to construct vacuum collection systems for the Little Venice (located within the

City of Marathon) and Baypoint projects. These systems are operating properly but have required significant operator maintenance to ensure reliable service. FCAA has recommended installation of gravity systems for future construction.

FCAA has evaluated the performance of Sequencing Batch Reactors for nutrient removal and determined that Bardenpho treatment is reliable and can be built on similar footprints often at lower cost.

### ***Project Description by Project Segments/Service Areas***

#### ***Middle Keys***

FCAA has completed the Layton and Little Venice wastewater projects in the Middle Keys and is currently implementing the Duck Key and Conch Key Service Area described below:

- **Duck Key and Conch Key Service Area**, extends from approximately MM 60.5 to 61.5 and includes Conch Key, Duck Key and Indies Island. The 0.2 MGD secondary WWTP which served Indies Island was acquired by FCAA. A collection system and transmission main were constructed to connect Conch to take advantage of additional existing capacity. The existing WWTP will be upgraded to a Bardenpho System to include capacity for Duck Key.

#### ***Lower Keys***

The Lower Keys is located south of Marathon and extends east to the City of Key West. This area represents 11,000 EDUs and has been subdivided into the following Service Areas to minimize the number of WWTPs and linear feet of pipe required to connect the maximum developed properties:

- **North Lower Keys Regional Wastewater Treatment System (NLKRWS)**, extends from MM 26-34 and is comprised of the Ramrod, Little Torch, and Big Pine Keys. Approximately 0.5 MGD treatment capacity is required for the area. Expansion of the proposed plant capacity to be constructed for the MLKRWS may be considered if construction of a 0.8 MGD plant and transmission main is less costly than construction of two WWTPs.
- **Middle Lower Keys Regional Wastewater Treatment System (MLKRWS)**, extends from MM 18-26 and is comprised of Summerland, Cudjoe and Upper Sugarloaf. Approximately 0.3 MGD treatment capacity is required for the area. The Bardenpho plant is to be constructed at the Cudjoe Solid Waste Transfer Station where land is available to design additional treatment capacity for the NLKRWS.
- **Lower Sugarloaf Wastewater Treatment System (LSWTS)**, extends from MM 16.5 to MM 17.5. Approximately 0.08 MGD treatment capacity is required for the area. Rather than construct a second BAT WWTP at Lower Sugarloaf, FCAA plans to expand and upgrade the Baypoint BAT WWTP to AWT.
- **Baypoint Wastewater Treatment System (BWTS)**, is located at MM 15 and is complete.
- **South Lower Keys Regional Wastewater System (SLKRWS)**, extends from MM 6.5 to 11.5 and is comprised of Shark, Big Coppitt, Geiger, and Rockland

Keys. The WWTP for the area is designed to treat 0.320 MGD and includes treatment capacity for Key Haven which presently utilizes a secondary WWTP.



## **Appendix C – Keys Wastewater Plan Project Costs and Funding Sources**

Keys Wastewater Plan  
November 2007



**Table 2.1:** North Key Largo Utility Corporation - Project Costs and Funding Sources

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Administration Costs	Engineering and Design Costs	Land Cost	Construction Cost	Total Project Cost	Construction Start Date
FY 07 - 08	Subtotal FY 07-08			\$ -	\$ -	\$ -	\$ -		
FY 08 - 09	Ocean Reef	Advanced Wastewater and Reuse TP***	Ocean Reef Community Assn.	\$ 100,000	\$ 750,000	\$ -	\$ 9,500,000	\$ 10,350,000	August-08
	Subtotal FY 08-09			\$ 100,000	\$ 750,000	\$ -	\$ 9,500,000	\$ 10,350,000	
FY 09 - 10	Subtotal FY 09-10			-	-	-	-		
FY 10 - 11	Subtotal FY 10-11			-	-	-	-		
FY 11 - 12	Subtotal FY 11-12			-	-	-	-		
TOTALS				100,000	750,000	-	9,500,000	10,350,000	
TOTALS (\$M)				0.10	0.75	-	9.50	10.35	

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue	Local Planning and Engineering Revenue (Ad	Additional Local Revenue (Sales Tax Revenue)	State Grant Funding**	Total Funding	Unfunded Costs
FY 07 - 08	Subtotal FY 07-08			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 08 - 09	Ocean Reef	Advanced Wastewater and Reuse TP***	Ocean Reef Community Assn.	\$ -	\$ 5,175,000	\$ -	\$ 159,850	\$ 5,334,850	\$ 5,015,150
	Subtotal FY 08-09			\$ -	\$ 5,175,000	\$ -	\$ 159,850	\$ 5,334,850	\$ 5,015,150
FY 09 - 10	Subtotal FY 09-10			-	-	-	-	-	-
FY 10 - 11	Subtotal FY 10-11			-	-	-	-	-	-
FY 11 - 12	Subtotal FY 11-12			-	-	-	-	-	-
TOTALS				-	5,175,000	-	159,850	5,334,850	5,015,150
TOTALS (\$M)				-	5.18	-	0.16	5.33	5.02

\*North Key Largo Utility Corporation Sewer Usage Charge

\*\*State Grant Requested

\*\*\*The current wastewater treatment facility operated by the NKLUC is 555,000 gpd extended aeration secondary treatment plant discharging to four Class V injection wells meeting typical secondary treatment effluent standards.



Table 2.2: Key Largo Water Treatment District - Project Costs

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Admin Costs	Engineering and Design Costs	Land Cost	Utility Construction Cost	Private Property Construction Cost	Total Construction Cost	Total Project Cost	Construction Start Date
Previous Years	Basin E Demonstration Project	0.183 mgd Plant, KL Trailer Village, KL Park	MM100.3 - MM101.5 Bayside	\$ 2,298,251	\$ 749,305	\$ 826,234	\$ 10,851,695	\$ 4,455,517	\$ 15,307,212	\$ 17,457,313.99	October - 0
	North Force Main	Northern Half Transmission	MM100.3 - MM106.5		\$ 208,234	\$ -	\$ 2,686,766	na	\$ 2,686,766	\$ 3,469,563	August - 0
	Basin A Collection System	Lake Surprise, Sexton Cove, Ocean Isle Estates	MM105.2 - MM106.5		\$ 340,000		\$ 8,415,000	\$ 3,297,586	\$ 11,712,586	\$ 12,627,149	July - 0
	Basin D Collection System	Largo Gardens, Bahia Mar, Pennekamp Park	MM101.0 - 102.5		\$ 366,000		\$ 8,795,000	\$ 3,096,207	\$ 11,891,207	\$ 12,831,770	August - 0
	Subtotal Previous Years			\$ 2,298,251	\$ 1,663,539	\$ 826,234	\$ 30,748,461	\$ 10,849,310	\$ 41,597,771	\$ 46,385,795	
FY 07 - 08	Regional Treatment Plant	2.30 mgd plant service to entire island	MM 91.0 - MM 106.0	\$ 950,000	\$ 742,000	\$ 424,000	\$ 31,507,749	na	\$ 31,507,749	\$ 32,911,249	March - 0
	Basin B Collection System	Stillwright Point, Largo Sound Park, Riviera Village	MM103.4 - MM105.2		\$ 567,000		\$ 15,053,000	\$ 6,242,759	\$ 21,295,759	\$ 22,100,259	February - 0
	South Force Main	Southern Half Transmission	MM 91.0 - MM100.3		\$ 288,000		\$ 4,002,000	na	\$ 4,002,000	\$ 4,527,500	March - 0
	Basin C Collection System	Twin Lakes, S. Creek Village, Largo Sound	MM102.5 - MM103.4		\$ 416,000		\$ 11,851,000	\$ 3,624,828	\$ 15,475,828	\$ 16,129,328	September-0
	Subtotal FY 07-08			\$ 950,000	\$ 2,013,000	\$ 424,000	\$ 62,413,749	\$ 9,867,586	\$ 72,281,335	\$ 75,668,335	
FY 08 - 09	Basin E Collection System	Holiday Homesites, Silver Lake Park	MM 99.8 - MM101.5 Oceanside	\$ 1,092,000	\$ 158,000		\$ 3,339,000	\$ 1,384,483	\$ 4,723,483	\$ 5,427,483	January-0
	Basin F Collection System	Port Largo, Key Largo Beach, Buttonwood Shores	MM99.5 - MM99.8		\$ 521,000	\$ 300,000	\$ 13,924,000	\$ 8,657,800	\$ 22,581,800	\$ 23,948,800	March-0
	Subtotal FY 08-09			\$ 1,092,000	\$ 679,000	\$ 300,000	\$ 17,263,000	\$ 10,042,283	\$ 27,305,283	\$ 29,376,283	
FY 09 - 10	Basin G Collection System	Buccaneer Point, Harbor Shores, Pirate's Cove	MM98.5 - MM99.5	\$ 1,134,000	\$ 307,000	\$ 300,000	\$ 8,756,000	\$ 7,174,138	\$ 15,930,138	\$ 16,915,138	September-0
	Basin H Collection System	The Harborage, Rock Harbor, Mandalay	MM97.2 - MM98.5		\$ 229,000	\$ 300,000	\$ 7,190,000	\$ 2,693,448	\$ 9,883,448	\$ 10,790,448	January-1
	Basin K Collection System	Hammer Point, Old Tavernier Area, Tavernier Beach	MM91.0 - MM93.0		\$ 395,000	\$ 300,000	\$ 12,149,000	\$ 3,750,690	\$ 15,899,690	\$ 16,672,690	June-1
	Subtotal FY 09-10			\$ 1,134,000	\$ 931,000	\$ 900,000	\$ 28,095,000	\$ 13,618,276	\$ 41,713,276	\$ 44,678,276	
FY 10 - 11	Basin I Collection System	Wynken-Blyken, Silver Shores, Sunset Point	MM93.9 - MM97.2	\$ 1,193,000	\$ 594,000	\$ 300,000	\$ 18,189,000	\$ 4,380,000	\$ 22,569,000	\$ 24,059,500	December-1
	Basin J Collection System	Blue Water, Harris Ocean Point, Ocean Park Village	MM93.0 - MM93.9		\$ 469,000	\$ 300,000	\$ 13,074,000	\$ 2,013,793	\$ 15,087,793	\$ 16,453,293	May-1
	Subtotal FY 10-11			\$ 1,193,000	\$ 1,063,000	\$ 600,000	\$ 31,263,000	\$ 6,393,793	\$ 37,656,793	\$ 40,512,793	
FY 11 - 12	CR 905 North Clusters	Carysfort Area, Gulf Stream Shores	MM106.5 - Ocean Reef	\$ 1,190,000	\$ 150,000	\$ 300,000	\$ 4,000,000			\$ 5,045,000	January-1
	Hwy 1 North Package Plants	Jewish Creek Area, Manatee Bay Area	MM106.5 - MM111.0		\$ 225,000	\$ 300,000	\$ 5,500,000			\$ 6,620,000	June-1
	Subtotal FY 11-12			\$ 1,190,000	\$ 375,000	\$ 600,000	\$ 9,500,000			\$ 11,665,000	
TOTALS				7,857,251	6,724,539	3,650,234	179,283,210	50,771,248	220,554,458	248,286,482	
TOTALS (\$M)				7.86	6.72	3.65	179.28	50.77	220.55	248.29	



Table 2.2 (Cont.): Key Largo Water Treatment District - Project Funding Sources

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue	Private Construction Revenue	Local Planning and Engineering Revenue (Ad Valorem MSTUs or	Additional Local Revenue (Sales Tax Revenue)	State Grant Funding	Federal Grant Funding	Total Funding	Unfunded Costs
Previous Years	Basin E Demonstration Project	0.183 mgd Plant, KL Trailer Village, KL Park	MM100.3 - MM101.5 Bayside	\$ 5,045,042	\$ 4,455,517	\$ 2,298,251	\$ 2,504,579	\$ 4,041,000	\$ 5,207,619	\$ 21,828,320	\$ (4,371,006)
	North Force Main	Northern Half Transmission	MM100.3 - MM106.5	\$ 12,372,036	na		\$ -	\$ -	\$ -	\$ 12,946,599	\$ (9,477,036)
	Basin A Collection System	Lake Surprise, Sexton Cove, Ocean Isle Estates	MM105.2 - MM106.5	\$ 4,576,042	\$ 3,297,586		\$ -	\$ -	\$ -	\$ 8,448,191	\$ 4,178,958
	Basin D Collection System	Largo Gardens, Bahia Mar, Pennekamp Park	MM101.0 - 102.5	\$ 4,310,000	\$ 3,096,207		\$ -	\$ -	\$ -	\$ 7,980,770	\$ 4,851,000
	Subtotal Previous Years			\$ 26,303,120	\$ 10,849,310	\$ 2,298,251	\$ 2,504,579	\$ 4,041,000	\$ 5,207,619	\$ 51,203,879	\$ (4,818,084)
FY 07 - 08	Regional Treatment Plant	2.30 mgd plant service to entire island	MM 91.0 - MM 106.0		na	\$ 950,000	\$ 20,000,000			\$ 20,237,500	\$ 12,673,749
	Basin B Collection System	Stillwright Point, Largo Sound Park, Riviera Village	MM103.4 - MM105.2	\$ 6,188,600	\$ 6,242,759			\$ 6,038,000		\$ 18,706,859	\$ 3,393,400
	South Force Main	Southern Half Transmission	MM 91.0 - MM100.3	\$ 7,627,562	na					\$ 7,865,062	\$ (3,337,562)
	Basin C Collection System	Twin Lakes, S. Creek Village, Largo Sound	MM102.5 - MM103.4	\$ 6,966,435	\$ 3,624,828					\$ 10,828,763	\$ 5,300,565
	Subtotal FY 07-08			\$ 20,782,597	\$ 9,867,586	\$ 950,000	\$ 20,000,000	\$ 6,038,000	\$ -	\$ 57,638,183	\$ 18,030,152
FY 08 - 09	Basin E Collection System	Holiday Homesites, Silver Lake Park	MM 99.8 - MM101.1 Oceanside	\$ 1,481,000	\$ 1,384,483	\$ 766,000				\$ 3,248,483	\$ 2,179,000
	Basin F Collection System	Port Largo, Key Largo Beach, Buttonwood Shores	MM99.5 - MM99.8	\$ 7,313,000	\$ 8,657,800					\$ 16,353,800	\$ 7,595,000
	Subtotal FY 08-09			\$ 8,794,000	\$ 10,042,283	\$ 766,000	\$ -	\$ -	\$ -	\$ 19,602,283	\$ 9,774,000
FY 09 - 10	Basin G Collection System	Buccaneer Point, Harbor Shores, Pirate's Cove	MM98.5 - MM99.5	\$ 4,877,000	\$ 7,174,138					\$ 12,051,138	\$ 4,864,000
	Basin H Collection System	The Harborage, Rock Harbor, Mandalay	MM97.2 - MM98.5	\$ 2,598,000	\$ 2,693,448					\$ 5,291,448	\$ 5,499,000
	Basin K Collection System	Hammer Point, Old Tavernier Area, Tavernier Beach	MM91.0 - MM93.0	\$ 3,990,000	\$ 3,750,690					\$ 7,740,690	\$ 8,932,000
	Subtotal FY 09-10			\$ 11,465,000	\$ 13,618,276	\$ -	\$ -	\$ -	\$ -	\$ 25,083,276	\$ 19,595,000
FY 10 - 11	Basin I Collection System	Wynken-Blyken, Silver Shores, Sunset Point	MM93.9 - MM97.2	\$ 2,893,000	\$ 4,380,000					\$ 7,273,000	\$ 16,786,500
	Basin J Collection System	Blue Water, Harris Ocean Point, Ocean Park Village	MM93.0 - MM93.9	\$ 4,119,000	\$ 2,013,793					\$ 6,132,793	\$ 10,320,500
	Subtotal FY 10-11			\$ 7,012,000	\$ 6,393,793	\$ -	\$ -	\$ -	\$ -	\$ 13,405,793	\$ 27,107,000
FY 11 - 12	CR 905 North Clusters	Carysfort Area, Gulf Stream Shores	MM106.5 - Ocean Reef	\$ 250,000						\$ 250,000	\$ 4,795,000
	Hwy 1 North Package Plants	Jewish Creek Area, Manatee Bay Area	MM106.5 - MM111.0	\$ 400,000						\$ 400,000	\$ 6,220,000
	Subtotal FY 11-12			\$ 650,000		\$ -	\$ -	\$ -	\$ -	\$ 650,000	\$ 11,015,000
TOTALS				75,006,717	50,771,248	4,014,251	22,504,579	10,079,000	5,207,619	167,583,414	80,703,068
TOTALS (\$M)				75.01	50.77	4.01	22.50	10.08	5.21	167.58	80.70

Keys Wastewater Plan  
November 2007



Table 2.3: Islamorada - Project Costs

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Administration Cost	Engineering and Design Costs	Land Cost	Construction Cost	Private Property Construction Cost	Total Construction Cost	Total Project Cost	Construction Start Date
Previous Years	NPK	NPKWWTF and NPK Collection System 1109 EDUs	MM99.0 and MM89.7 - Nav Creek	\$ 476,634	\$ 1,099,522	\$ 208,640	\$ 20,689,397	\$ 3,650,000	\$ 24,339,397	\$ 26,124,193	Completed
	Subtotal FY Previous Years			\$ 476,634	\$ 1,099,522	\$ 208,640	\$ 20,689,397	\$ 3,650,000	\$ 24,339,397	\$ 26,124,193	
FY 07 - 08	SPK	SPK WWTF	MM86.7	\$ 305,000	\$ 732,000	\$ 1,500,000	\$ 6,100,000	na	\$ 6,100,000	\$ 8,637,000	August-08
	SPK	Collection System	MM88.5-MM88.0	\$ 670,000	\$ 1,608,000	\$ 400,000	\$ 13,400,000	\$ 7,026,250	\$ 20,426,250	\$ 23,104,250	August-08
	MPK	NPK Plant Expansion	MM90.0	\$ 215,000	\$ 516,000	\$ 600,000	\$ 4,300,000	na	\$ 4,300,000	\$ 5,631,000	February-08
	MPK	Collection System	MM88.0-MM89.7	\$ 670,000	\$ 1,608,000	\$ 300,000	\$ 13,400,000	\$ 5,329,000	\$ 13,400,000	\$ 15,978,000	February-08
	Subtotal FY 07-08			\$ 1,860,000	\$ 4,464,000	\$ 2,800,000	\$ 37,200,000	\$ 12,355,250	\$ 44,226,250	\$ 53,350,250	
FY 08 - 09	LMK	WWTF	MM74.5	\$ 320,000	\$ 768,000	\$ 800,000	\$ 6,400,000	na	\$ 6,400,000	\$ 8,288,000	August-09
	LMK	Collection System	MM73.6-MM77.6	\$ 740,000	\$ 1,776,000	\$ 300,000	\$ 14,800,000	\$ 6,371,138	\$ 21,171,138	\$ 23,987,138	September-08
	Subtotal FY 08-09			\$ 1,060,000	\$ 2,544,000	\$ 1,100,000	\$ 21,200,000	\$ 6,371,138	\$ 27,571,138	\$ 32,275,138	
FY 09 - 10	UMK	WWTF	MM80.9	\$ 535,000	\$ 1,284,000	\$ 1,800,000	\$ 10,700,000	na	\$ 10,700,000	\$ 14,319,000	July-10
	UMK	South Collection Sys.	MM79.0-MM81.8	\$ 390,000	\$ 936,000	\$ -	\$ 7,800,000	\$ 12,022,345	\$ 19,822,345	\$ 21,148,345	February-10
	UMK	North Collection System	MM81.8-MM83.4	\$ 390,000	\$ 936,000	\$ 300,000	\$ 7,800,000	accounted for under South Collection System	\$ 7,800,000	\$ 9,426,000	February-10
	Subtotal FY 09-10			\$ 1,315,000	\$ 3,156,000	\$ 2,100,000	\$ 26,300,000	\$ 12,022,345	\$ 38,322,345	\$ 44,893,345	
FY 10 - 11	WK	WWTF	MM84.6	\$ 235,000	\$ 564,000	\$ 1,000,000	\$ 4,700,000	na	\$ 4,700,000	\$ 6,499,000	October-10
	WK	Collection System	MM83.4-MM85.5	\$ 155,000	\$ 372,000	\$ -	\$ 3,100,000	\$ 2,935,103	\$ 6,035,103	\$ 6,562,103	October-10
	Subtotal FY 10-11			\$ 390,000	\$ 936,000	\$ 1,000,000	\$ 7,800,000	\$ 2,935,103	\$ 10,735,103	\$ 13,061,103	
TOTALS				5,101,634	12,199,522	7,208,640	113,189,397	37,333,836	145,194,233	169,704,029	
TOTALS (\$M)				5.10	12.20	7.21	113.19	37.33	145.19	169.70	

Keys Wastewater Plan  
November 2007

Table 2.3 (Cont.): Islamorada - Project Funding Sources



STATE FISCAL YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue	Private Construction Revenue	Local Planning and Engineering Revenue (Ad Valorem MSTUs or other)*	Additional Local Revenue (Sales Tax Revenue)	State Grant Funding	Federal Grant Funding	Total Funding	Unfunded Costs
Previous Years	NPK	NPKWWTF and NPK Collection System 1109 EDUs	MM99.0 and MM89.7 - Nav Creek	\$ 9,061,943	\$ 3,650,000	\$ -	\$ 400,328	\$ 10,300,000	\$ 2,711,922	\$ 26,124,193	\$ -
	Subtotal FY Previous Years			\$ 9,061,943	\$ 3,650,000	\$ -	\$ 400,328	\$ 10,300,000	\$ 2,711,922	\$ 26,124,193	\$ -
FY 07 - 08	SPK	SPK WWTF	MM86.7	\$ 3,866,500	na	\$ -	\$ 452,000	\$ -	\$ -	\$ 4,318,500	\$ 4,318,500
	SPK	Collection System	MM88.5-MM88.0	\$ 8,039,000	\$ 7,026,250	\$ -	\$ -	\$ -	\$ -	\$ 15,065,250	\$ 8,039,000
	MPK	NPK Plant Expansion	MM90.0	\$ 2,815,500	na	\$ -	\$ -	\$ -	\$ -	\$ 2,815,500	\$ 2,815,500
	MPK	Collection System	MM88.0-MM89.7	\$ 7,989,000		\$ -	\$ -	\$ -	\$ -	\$ 7,989,000	\$ 7,989,000
	Subtotal FY 07-08			\$ 22,710,000	\$ 7,026,250	\$ -	\$ 452,000	\$ -	\$ -	\$ 30,188,250	\$ 23,162,000
FY 08 - 09	LMK	WWTF	MM74.5	\$ 4,144,000		\$ -	\$ -	\$ -	\$ -	\$ 4,144,000	\$ 4,144,000
	LMK	Collection System	MM73.6-MM77.6	\$ 8,808,000	\$ 6,371,138	\$ -	\$ -	\$ -	\$ 3,801,017	\$ 18,980,155	\$ 5,006,983
	Subtotal FY 08-09			\$ 12,952,000	\$ 6,371,138	\$ -	\$ -	\$ -	\$ 3,801,017	\$ 23,124,155	\$ 9,150,983
FY 09 - 10	UMK	WWTF	MM80.9	\$ 7,159,500	na	\$ -	\$ -	\$ -	\$ -	\$ 7,159,500	\$ 7,159,500
	UMK	South Collection Sys.	MM79.0-MM81.8	\$ 4,563,000	\$ 12,022,345	\$ -	\$ -	\$ -	\$ -	\$ 16,585,345	\$ 4,563,000
	UMK	North Collection System	MM81.8-MM83.4	\$ 4,713,000	accounted for under South Collection System	\$ -	\$ -	\$ -	\$ -	\$ 4,713,000	\$ 4,713,000
	Subtotal FY 09-10			\$ 16,435,500	\$ 12,022,345	\$ -	\$ -	\$ -	\$ -	\$ 28,457,845	\$ 16,435,500
FY 10 - 11	WK	WWTF	MM84.6	\$ 3,249,500		\$ -	\$ -	\$ -	\$ -	\$ 3,249,500	\$ 3,249,500
	WK	Collection System	MM83.4-MM85.5	\$ 1,813,500	\$ 2,935,103	\$ -	\$ -	\$ -	\$ -	\$ 4,748,603	\$ 1,813,500
	Subtotal FY 10-11			\$ 5,063,000	\$ 2,935,103	\$ -	\$ -	\$ -	\$ -	\$ 7,998,103	\$ 5,063,000
TOTALS				66,222,443	32,004,836	-	852,328	10,300,000	6,512,939	115,892,546	53,811,483
TOTALS (\$M)				66.22	32.00	-	0.85	10.30	6.51	115.89	53.81

Keys Wastewater Plan  
November 2007



**Table 2.4:** Key Colony Beach - Project Costs and Funding Sources

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Administration Costs	Engineering and Design Costs	Land Cost	Construction Cost	Total Project Cost	Construction Start Date
Previous Years		Subtotal FY Previous Years		\$ -	\$ -	\$ -	\$ -	\$ -	
FY 07 - 08		Subtotal FY 07-08		\$ -	\$ -	\$ -	\$ -	\$ -	
FY 08 - 09		WW Line Rehabilitation		\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000	July-08
		Subtotal FY 08-09		\$ -	\$ -	\$ -	\$ 500,000	\$ 500,000	
FY 09 - 10		Subtotal FY 09-10		\$ -	\$ -	\$ -	\$ -	\$ -	
FY 10 - 11		Subtotal FY 10-11		\$ -	\$ -	\$ -	\$ -	\$ -	
TOTALS				-	-	-	500,000	500,000	
TOTALS (\$M)				-	-	-	0.50	0.50	

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue	Local Planning and Engineering Revenue (Ad Valorem MSTUs or other)*	Additional Local Revenue (Sales Tax Revenue)	State Grant Funding	Total Funding	Unfunded Costs
Previous Years		Subtotal FY Previous Years		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 07 - 08		Subtotal FY 07-08		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 08 - 09		WW Line Rehabilitation		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000
		Subtotal FY 08-09		\$ -	\$ -	\$ -	\$ -	\$ -	\$ 500,000
FY 09 - 10		Subtotal FY 09-10		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 10 - 11		Subtotal FY 10-11		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
TOTALS				-	-	-	-	-	500,000
TOTALS (\$M)				-	-	-	-	-	0.50

Keys Wastewater Plan  
November 2007



Table 2.5: Marathon - Project Costs

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Administration Costs	Engineering and Design Costs	Land Cost	Construction Cost	Private Property Construction Cost	Total Construction Cost	Total Project Cost	Construction Start Date
Previous Years	4 Vaca Key Central		33rd Street - 60th Street Including Sombbrero Area	\$ 159,410	\$ 651,970	\$ 1,104,770	\$ 22,715,527	\$ 8,719,850	\$ 31,435,377	\$ 33,351,527	under construction
	Subtotal FY Previous Years			\$ 159,410	\$ 651,970	\$ 1,104,770	\$ 22,715,527	\$ 8,719,850	\$ 31,435,377	\$ 33,351,527	
FY 08 - 09	1 Knights Key		Entire Island	\$ 159,410	\$ 231,600	\$ 150,000	\$ 624,431	\$ 503,700	\$ 1,128,131	\$ 1,669,141	January-08
	6 Fat Deer Key (West) - Coco Plum		Vaca Cut to Coco Plum - south to the end of Coco Plum Drive	\$ 159,410	\$ 684,811	\$ 914,663	\$ 9,859,822	\$ 3,387,200	\$ 13,247,022	\$ 15,005,906	February-08
	5 Vaca Key East		60th St to Vaca Cut including Little Venice	\$ 159,410	\$ 1,211,488	\$ 500,000	\$ 25,398,910	\$ 7,606,600	\$ 33,005,510	\$ 34,876,408	October-07
	2 Boot Key		Entire Island	\$ 159,410	\$ 92,616	\$ -	\$ 40,170	na	\$ 40,170	\$ 292,196	January-08
	3 Vaca Key West		11th St to 33rd St	\$ 159,410	\$ 560,222	\$ 500,000	\$ 12,113,218	\$ 5,398,350	\$ 17,511,568	\$ 18,731,200	February-08
	Subtotal FY 07-08			\$ 797,050	\$ 2,780,737	\$ 2,064,663	\$ 48,036,551	\$ 16,895,850	\$ 64,932,401	\$ 70,574,851	
FY 09 - 10	7 Grassy Key		Fat Deer Key East through Grassy Key	\$ 159,410	\$ 287,753	\$ 500,000	\$ 5,776,245	na	\$ 5,776,245	\$ 6,723,408	August-09
	Subtotal FY 09-10			\$ 159,410	\$ 287,753	\$ 500,000	\$ 5,776,245	\$ -	\$ 5,776,245	\$ 6,723,408	
TOTALS				1,115,870	3,720,460	3,669,433	76,528,323	25,615,700	102,144,023	110,649,786	
TOTALS (\$M)				1.12	3.72	3.67	76.53	25.62	102.14	110.65	



Keys Wastewater Plan  
November 2007



Table 2.5 (Cont.): Marathon - Project Funding Sources

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue	Private Construction Revenue	Local Planning and Engineering Revenue (Ad Valorem MSTUs or other)*	Additional Local Revenue (Sales Tax Revenue)	State Grant Funding	Federal Grant Funding	Total Funding	Unfunded Costs
Previous Years	4 Vaca Key Central		33rd Street - 60th Street Including Sombrero Area	\$ 10,356,537	\$ 8,719,850	\$ 727,717	\$ 3,694,752	\$ 8,100,000	\$ -	\$ 31,598,856	\$ 1,752,671
	Subtotal FY Previous Years			\$ 10,356,537	\$ 8,719,850	\$ 727,717	\$ 3,694,752	\$ 8,100,000	\$ -	\$ 31,598,856	\$ 1,752,671
FY 07 - 08	1 Knights Key		Entire Island	\$ 373,459	\$ 503,700	\$ 150,989	\$ 174,816	\$ -	\$ -	\$ 1,202,964	\$ 466,177
	6 Fat Deer Key (West) - Coco Plum		Vaca Cut to Coco Plum - south to the end of Coco Plum Drive	\$ 3,961,648	\$ 3,387,200	\$ 766,770	\$ 1,742,806	\$ -	\$ 500,000	\$ 10,358,424	\$ 4,647,482
	5 Vaca Key East		60th St to Vaca Cut including Little Venice	\$ 11,535,855	\$ 7,606,600	\$ 735,559	\$ 4,090,471	\$ -	\$ -	\$ 23,968,485	\$ 10,907,923
	2 Boot Key		Entire Island	\$ 64,119	na	\$ 67,369	\$ 43,829	\$ -	\$ -	\$ 175,317	\$ 116,879
	3 Vaca Key West		11th St to 33rd St	\$ 5,768,074	\$ 5,398,350	\$ 231,709	\$ 1,999,928	\$ -	\$ -	\$ 13,398,061	\$ 5,333,140
	Subtotal FY 07-08			\$ 21,703,155	\$ 16,895,850	\$ 1,952,396	\$ 8,051,850	\$ -	\$ 500,000	\$ 49,103,251	\$ 21,471,600
FY 08 - 09				\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
	Subtotal FY 08-09			\$ -		\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
FY 09 - 10	7 Grassy Key		Fat Deer Key East through Grassy Key	\$ 2,918,156	na	\$ 107,378	\$ 1,008,511	\$ -	\$ -	\$ 4,034,045	\$ 2,689,363
	Subtotal FY 09-10			\$ 2,918,156	\$ -	\$ 107,378	\$ 1,008,511	\$ -	\$ -	\$ 4,034,045	\$ 2,689,363
TOTALS				34,977,848	25,615,700	2,787,491	12,755,113	8,100,000	500,000	84,736,152	25,913,634
TOTALS (\$M)				34.98	25.62	2.79	12.76	8.10	0.50	84.74	25.91

Keys Wastewater Plan  
November 2007



Table 2.6: Monroe County /FKAA Project Costs

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Admin Costs	Engineering and Design Costs	Land Cost	Private Property Construction Cost*	Construction Cost	Total Construction Cost	Total Project Cost	Construction Start Date
Previous Years	Little Venice Phases I and II			Note: Detailed project breakouts not available, so all project costs placed in construction line			\$ 3,449,250	\$ 14,663,000	\$ 18,112,250	\$ 18,112,250	
	Bay Point						\$ 1,565,850	\$ 6,614,000	\$ 8,179,850	\$ 8,179,850	
	Conch Key						\$ 547,500	\$ 2,741,000	\$ 3,288,500	\$ 3,288,500	
	City of Layton						\$ 1,277,500	\$ 5,200,000	\$ 6,477,500	\$ 6,477,500	
	South Lower Keys	Gravity collection, new 0.32 MGD WWTP, 2200 EDUs	MM8.5 - MM11.5	\$ 1,890,000	\$ 1,800,000	\$ 800,000	\$ 8,030,000	\$ 34,700,000	\$ 42,730,000	\$ 47,220,000	February-07
	Subtotal FY Previous Years				\$ 1,890,000	\$ 1,800,000	\$ 800,000	\$ 14,870,100	\$ 63,918,000	\$ 78,788,100	\$ 83,278,100
FY 07 - 08	Duck Key and Conch Key	Gravity collection, 0.2 MGD WWTP upgrade, 375 EDUs	MM60.5 - MM61.5	\$ 820,000	\$ 1,000,000	\$ -	\$ 1,368,750	\$ 17,400,000	\$ 18,768,750	\$ 20,588,750	December-07
	Middle Lower Keys	Collection and new WWTP 2,200 EDUs	MM18.0 - MM34.0	\$ 2,940,000	\$ 3,000,000	\$ -	\$ 8,030,000	\$ 51,750,000	\$ 59,780,000	\$ 65,720,000	June-08
	Subtotal FY 07-08				\$ 3,760,000	\$ 4,000,000	\$ -	\$ 9,398,750	\$ 69,150,000	\$ 78,548,750	\$ 86,308,750
FY 08 - 09	North Lower Keys	Collection and new WWTP 3,850 EDUs	MM26.0 - MM34.0	\$ 4,250,000	\$ 3,000,000	\$ 1,500,000	\$ 14,052,500	\$ 80,500,000	\$ 94,552,500	\$ 103,302,500	December-09
	Lower Sugarloaf	Collection, WWTP upgrade 600 EDUs	MM16.5-MM17.5	\$ 765,000	\$ 1,500,000	\$ -	\$ 2,190,000	\$ 13,800,000	\$ 15,990,000	\$ 18,255,000	June-10
	West Long Key	FM and WWTP expansion 800 EDUs	MM16.5-MM17.5	\$ 715,000	\$ 500,000		\$ 2,920,000	\$ 13,800,000	\$ 16,720,000	\$ 17,935,000	June-10
	Subtotal FY 08-09				\$ 5,730,000	\$ 5,000,000	\$ 1,500,000	\$ 19,162,500	\$ 108,100,000	\$ 127,262,500	\$ 139,492,500
TOTALS				11,380,000	10,800,000	2,300,000	43,431,350	241,168,000	284,599,350	309,079,350	
TOTALS (\$M)				11.38	10.80	2.30	43.43	241.17	284.60	309.08	
Broken down:											
City of Layton				-	-	-	1.28	5.20	6.48	6.48	
Monroe / FKAA				11.38	10.80	2.30	42.15	235.97	278.12	302.60	

\*The private property construction costs for Duck Key does not include Indies Island.

Keys Wastewater Plan  
November 2007



Table 2.6(Cont.): Monroe County /FKAA Project Funding Sources

STATE FISCAL					Local Planning and Engineering Revenue (Ad Valorem MSTUs or other)*	Additional Local Revenue (Sales Tax Revenue)	Private Construction Revenue*	State Grant Funding	Federal Grant Funding	Total Funding	Unfunded Costs
YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue							
Previous Years	Little Venice Phases I and II			\$ 4,290,240	\$ -	\$ 3,033,002	\$ 3,449,250	\$ 3,013,758	\$ 4,326,000	\$ 18,112,250	\$ -
	Bay Point			\$ 781,536	\$ 160,000	\$ 2,152,808	\$ 1,565,850	\$ 502,808	\$ 3,016,848	\$ 8,179,850	\$ -
	Conch Key			\$ 141,382	\$ 40,000	\$ 933,035	\$ 547,500	\$ 232,368	\$ 1,394,215	\$ 3,288,500	\$ -
	City of Layton			\$ 950,000	\$ -	\$ 100,000	\$ 1,277,500	\$ 3,350,000	\$ 800,000	\$ 6,477,500	\$ -
	South Lower Keys	Gravity collection, new 0.32 MGD WWTP, 2200 EDUs	MM8.5 - MM11.5	\$ 7,650,000	\$ 280,000	\$ 21,650,000	\$ 8,030,000	\$ 7,980,000	\$ -	\$ 45,590,000	\$ 1,630,000
	Subtotal FY Previous Years			\$ 13,813,158	\$ 480,000	\$ 27,868,845	\$ 14,870,100	\$ 15,078,934	\$ 9,537,063	\$ 81,648,100	\$ 1,630,000
FY 07 - 08	Duck Key and Conch Key	Gravity collection, 0.2 MGD WWTP upgrade, 375 EDUs	MM60.5 - MM61.5	\$ 1,800,000	\$ 150,000	\$ 12,750,000	\$ 1,368,750	\$ 3,000,000	\$ -	\$ 19,068,750	\$ 1,520,000
	Middle Lower Keys	Collection and new WWTP 2,200 EDUs	MM18.0 - MM34.0	\$ 8,370,000	\$ 300,000	\$ 3,000,000	\$ 8,030,000	\$ -	\$ -	\$ 19,700,000	\$ 46,020,000
	Subtotal FY 07-08			\$ 10,170,000	\$ 450,000	\$ 15,750,000	\$ 9,398,750	\$ 3,000,000	\$ -	\$ 38,768,750	\$ 47,540,000
FY 08 - 09	North Lower Keys	Collection and new WWTP 3,850 EDUs	MM26.0 - MM34.0	\$ 17,325,000	\$ -	\$ -	\$ 14,052,500	\$ -	\$ -	\$ 31,377,500	\$ 71,925,000
	Lower Sugarloaf	Collection, WWTP upgrade 600 EDUs	MM16.5-MM17.5	\$ 2,700,000	\$ -	\$ -	\$ 2,190,000	\$ -	\$ -	\$ 4,890,000	\$ 13,365,000
	West Long Key	FM and WWTP expansion 800 EDUs	MM16.5-MM17.5	\$ 1,800,000	\$ -	\$ -	\$ 2,920,000	\$ -	\$ -	\$ 4,720,000	\$ 13,215,000
	Subtotal FY 08-09			\$ 21,825,000	\$ -	\$ -	\$ 19,162,500	\$ -	\$ -	\$ 40,987,500	\$ 98,505,000
TOTALS				45,808,158	930,000	43,618,845	43,431,350	18,078,934	9,537,063	161,404,350	147,675,000
TOTALS (\$M)				45.81	0.93	43.62	43.43	18.08	9.54	161.40	147.68
Broken down:				0.95	-	0.10	1.28	3.35	0.80	6.48	-
City of Layton				44.86	0.93	43.52	42.15	14.73	8.74	154.93	147.68
Monroe / FKAA											

\*The private construction revenue for Duck Key does not include Indies Island.



Table 2.7: City of Key West - Project Costs

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	Planning and Administration Costs	Engineering and Design Costs	Land Cost	Construction Cost	Total Project Cost	Construction Start Date
Previous Years								\$ 64,000,000	
		Subtotal FY Previous Years		\$ -	\$ -	\$ -	\$ -	\$ 64,000,000	
FY 07 - 08	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ 200,000	\$ 200,000	Complete September-08
	Key West	PS DA & F.M.	Vernon to Dennis	\$ -	\$ 174,600	\$ -	\$ 1,796,000	\$ 1,970,600	Complete September-08
	Key West	WWTP Solids & Admin. Roof Repl	All of KW	\$ -	\$ 75,984	\$ -	\$ 489,150	\$ 565,134	Complete December-08
	Key West	PS Generators	B,C,F,G,R,J,N,O,ST,H All of KW	\$ -	\$ 326,406	\$ -	\$ 4,040,073	\$ 4,366,479	Complete March-08
	Key West	Truman Ann. Collection System	W KW	\$ -	\$ 250,000	\$ -	\$ -	\$ 250,000	Designed September-08
	Key West	WWTP Exp., F.M./Head Works	All of KW	\$ -	\$ 385,000	\$ -	\$ -	\$ 385,000	Designed September-08
	Key West	Pumps & HVAC WWTP	All of KW	\$ -	\$ -	\$ -	\$ 302,000	\$ 302,000	Complete September-08
	Key West	WWTP Headworks Replacement	All of KW	\$ -	\$ -	\$ -	\$ 495,000	\$ 495,000	Complete September-08
		Subtotal FY 07-08		\$ -	\$ 1,211,990	\$ -	\$ 7,322,223	\$ 8,534,213	
FY 08 - 09	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ 200,000	\$ 200,000	Complete September-09
	Key West	WWTP Diffused Air	All of KW	\$ -	\$ 290,000	\$ -	\$ -	\$ 290,000	Designed September-09
	Key West	Truman Ann. Collection System	W KW	\$ -	\$ -	\$ -	\$ 1,300,540	\$ 1,300,540	Complete September-10 (2 yr)
	Key West	WWTP Exp., F.M./Head Works	W KW	\$ -	\$ -	\$ -	\$ 3,955,000	\$ 3,955,000	Complete September-09
		Subtotal FY 08-09		\$ -	\$ 290,000	\$ -	\$ 5,455,540	\$ 5,745,540	
FY 09 - 10	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ 200,000	\$ 200,000	Complete September-10
	Key West	WWTP Diffused Air	All of KW	\$ -	\$ -	\$ -	\$ 1,795,000	\$ 1,795,000	Complete September-11 (2 Yr)
	Key West	Truman Ann. Collection System	W KW	\$ -	\$ -	\$ -	\$ 262,500	\$ 262,500	Complete September-10
		Subtotal FY 09-10		\$ -	\$ -	\$ -	\$ 2,257,500	\$ 2,257,500	
FY 10 - 11	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ 230,000	\$ 230,000	Complete September-11
	Key West	WWTP Diffused Air	All of KW	\$ -	\$ -	\$ -	\$ 2,084,750	\$ 2,084,750	Complete September-11
	Key West	WWTP Bio- Solids Dryer	All of KW	\$ -	\$ 350,000	\$ -	\$ -	\$ 350,000	Complete September-12
		Subtotal FY 10-11		\$ -	\$ 350,000	\$ -	\$ 2,314,750	\$ 2,664,750	
FY 11 - 12	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ 1,117,350	\$ 1,117,350	Complete September-12
	Key West	WWTP Bio- Solids Dryer	All of KW	\$ -	\$ -	\$ -	\$ 3,000,000	\$ 3,000,000	Complete September-12
	Key West	Gravity Sewer Green Street NW	Downtown KW	\$ -	\$ 150,000	\$ -	\$ 1,350,000	\$ 1,500,000	Complete September-12
	Key West	N Roosevelt F.M.	Sigsbee to Hilton Haven	\$ -	\$ -	\$ -	\$ 210,000	\$ 210,000	Complete September-12
		Subtotal FY 11-12		\$ -	\$ 150,000	\$ -	\$ 5,677,350	\$ 5,827,350	
TOTALS				-	2,001,990	-	23,027,363	89,029,353	
TOTALS (\$M)				-	2.00	-	23.03	89.03	

Keys Wastewater Plan  
November 2007



Table 2.7(Cont.): City of Key West - Project Funding

STATE FISCAL YEAR	Service Area	Description	Project Boundaries	System Development Fee Revenue	Local Planning and Engineering Revenue (Ad Valorem MSTUs or other)*	Additional Local Revenue (Sales Tax Revenue)	State Grant Funding	Federal Grant Funding	Total Funding	Unfunded Costs
Previous Years	Subtotal FY Previous Years			\$ -	\$ -	\$ -	\$ -	\$ -	\$ 64,000,000	\$ -
FY 07 - 08	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000
	Key West	PS DA & F.M.	S of Flagler, Vernon to Dennis	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,970,600
	Key West	WWTP Solids & Admin. Roof Repl	All of KW	\$ -	\$ -	\$ -	\$ -	\$ 423,700	\$ 423,700	\$ 141,434
	Key West	PS Generators	B,C,F,G,R,J,N,O ST,H All of KW	\$ -	\$ -	\$ -	\$ 2,000,000	\$ -	\$ 2,000,000	\$ 2,366,479
	Key West	Truman Ann. Collection System	W KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 250,000
	Key West	WWTP Exp., F.M./Head Works	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 385,000
	Key West	Pumps & HVAC WWTP	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 302,000
	Key West	WWTP Headworks Replacement	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 495,000
	Subtotal FY 07-08			\$ -	\$ -	\$ -	\$ 2,000,000	\$ 423,700	\$ 2,423,700	\$ 6,110,513
FY 08 - 09	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000
	Key West	WWTP Diffused Air	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 290,000
	Key West	Truman Ann. Collection System	W KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,300,540
	Key West	WWTP Exp., F.M./Head Works	W KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,955,000
	Subtotal FY 08-09			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,745,540
FY 09 - 10	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 200,000
	Key West	WWTP Diffused Air	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,795,000
	Key West	Truman Ann. Collection System	W KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 262,500
	Subtotal FY 09-10			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,257,500
FY 10 - 11	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 230,000
	Key West	WWTP Diffused Air	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,084,750
	Key West	WWTP Bio- Solids Dryer	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 350,000
	Subtotal FY 10-11			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,664,750
FY 11 - 12	Key West	Emergency Repair	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,117,350
	Key West	WWTP Bio- Solids Dryer	All of KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 3,000,000
	Key West	Gravity Sewer Green Street NW	Downtown KW	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 1,500,000
	Key West	N Roosevelt F.M.	Sigsbee to Hiltor Haven	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 210,000
	Subtotal FY 11-12			\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 5,827,350
TOTALS				-	-	-	2,000,000	423,700	66,423,700	22,605,653
TOTALS (\$M)				-	-	-	2.00	0.42	66.42	22.61